THE BREWING GUIDE

IMPORTANT
Read Carefully and Completely Before Using THE BEER MACHINE

STEP 1 *Add water to 1/3 of fill line in The Beer Machine. Add entire contents of The Beer Mix. Add the brewers yeast included with The Beer Mix. Seal the cap and PRV unit. Place in location where The Beer Machine can brew undisturbed for next 5 to 6 days.* **Do not add** *CO_2 from carbonation unit at this time!*

STEP 2 *After fermentation is completed, place The Beer Machine in a refrigerator for the next 4–5 days, so that conditioning and clarification can begin. Beer clarifies during this period more quickly in refrigerator. The natural carbonation produced during the fermentation period will now be absorbed into the beer. A sampling will indicate amount of effervescence. You may increase by adding CO_2 at this time, or add when serving. (Beer clarifies more rapidly and absorbs CO_2 more efficiently at cooler temperatures – 36° to 38° F.)*

STEP 3 *Serve on tap or bottle.*

INSPECT ENTIRE BEER MACHINE noting how it has been put together at the factory. Separate all parts to review Parts Check List, then inspect for possible defects due to shipping. **Do not use if damaged.** Call Customer Service for new parts.

PARTS CHECK LIST

Before going further, examine each piece and compare each with the accompanying diagram to ensure that all components are included.

1. two halves of the body
2. four side clamps
3. two end clamps
4. main pressure seal
5. spigot
6. spigot retainer nut and 2 washers
7. spigot delivery tube and float
8. top cap with pressure safety release valve assembly (*PRV*) including top neck seal and defoamer cup (as per figure 4)
9. carbonation unit and 8 gram food grade CO_2 soda syphon bulb (not B.B. gun type)
10. retainer nut for carbonation unit, backflow preventer and 2 washers
11. base
12. warranty card and Beer Mix reorder form

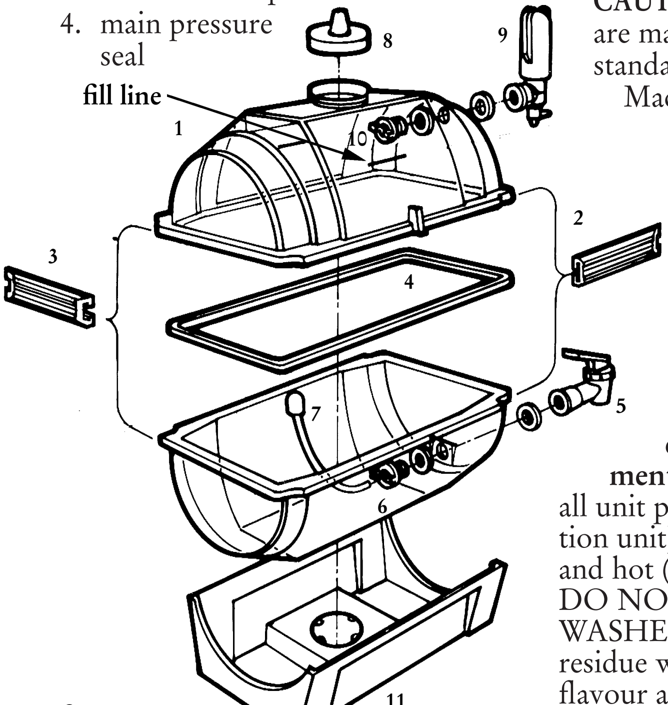


figure 1

CAUTION: All seals and parts are manufactured to food grade standards. Use only The Beer Machine Co. replacement parts. Additional parts may be ordered directly from the company, at 1-800-663-2739.

CLEANING – BEFORE BREWING

The key to successful brewing is absolute cleanliness of your equipment!! Clean your hands and all unit parts (except the carbonation unit) thoroughly with soap and hot (but not boiling) water. DO NOT PUT IN A DISHWASHER. Rinse off all soap. Any residue will produce an unwanted flavour and prevent head formation. Proceed with assembly.

SPIGOT, DELIVERY TUBE & FLOAT

Put the washer over the spigot retainer nut. The spigot retainer nut contains a small sleeve to secure the feed tube. Feed the threads through the hole in the lower front panel of the bottom half of your Beer Machine. Place the second washer over the threads now extended through the outside of the bottom half and screw the spigot onto the threads. Locate the spigot to point downward and tighten the retainer nut firmly. **Do not use a wrench**. Insert the tube, with the float attached, into the inside of the spigot retainer nut.

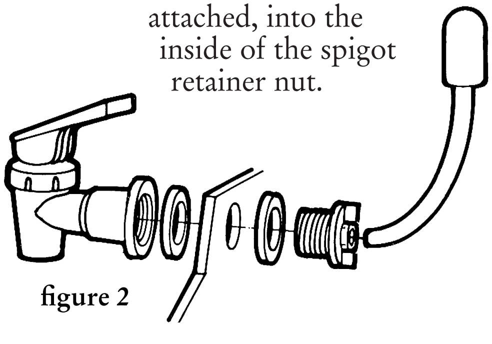


figure 2

CARBONATION UNIT

(figure 3) Place the washer over the threads of the retainer nut and insert it threads first through the hole in the upper front panel of the top half of your Beer Machine. Place the second washer over the threads now extended through the outside of the top half. Insert the backflow preventer into the re-

Continued inside

tainer nut with the flat disk facing into carbonation unit. Attach it by tightening the retaining nut as firmly as you can by hand. **You may use after your beer is made and has been in your refrigerator for at least 3 days**. The carbonation unit serves three functions: taste, preservation, and dispensing. To puncture the CO_2 bulb, screw the cap down all the way. Do not stop when the bulb punctures, continue to ***quickly*** turn the cap down all the way. **Caution–the CO_2 bulb is pressurized.** Handle carefully. Use only 8 gram food grade CO_2 bulbs.

TASTE. People vary in their desire for effervescence in beer. If you want more effervescence after conditioning, add a single burst of CO_2 by pressing very briefly on the release button protruding from the bottom of the CO_2 unit. Beer absorbs and retains CO_2 when cold and refrigerated. *Note: the carbonation unit will release partial amounts of CO_2 before freezing. To add more CO_2 you must wait two or three minutes until the carbonation unit warms and the icing condition melts.*

PRESERVATION. CO_2 is heavier than air and will in the confined space of The Beer Machine provide a protective blanket over your beer. This will help preserve your beer and protect it from absorbing unwanted flavours resulting from exposure to air.

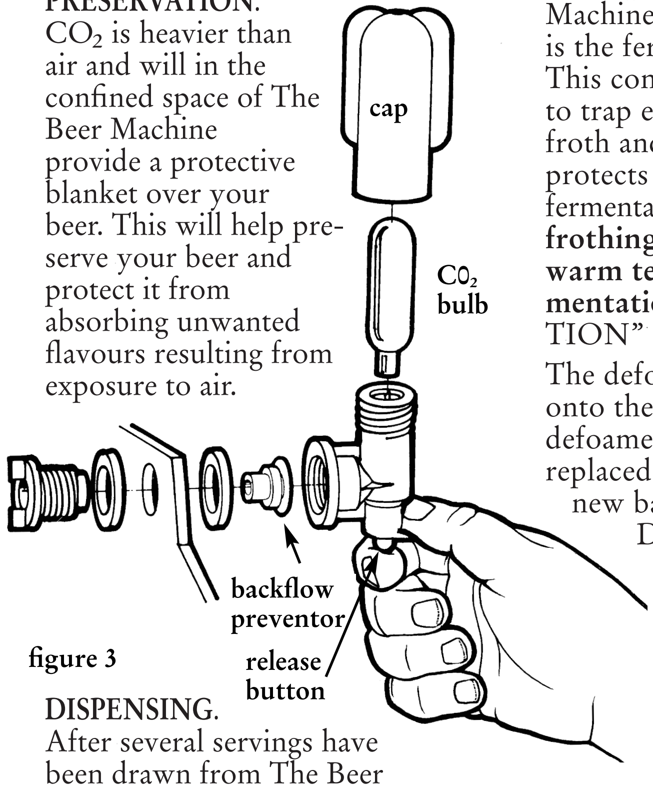


figure 3

DISPENSING. After several servings have been drawn from The Beer Machine it is possible to create a vacuum inside the unit and beer will not dispense. To maintain a positive dispensing pressure, add occasional bursts from the CO_2 unit. The carbonation unit allows you to maintain a positive pressure inside The Beer Machine. Pressure is best maintained and 'beer head' is created by developing a gentle touch on the spigot when pouring. **Do not add large amounts of CO_2 at one time**. The pressure release valve on the top cap of your unit is designed to release rapid increases or excessive pressures. Add CO_2 only in short bursts periodically. Normal usage is 2 or 3 bulbs per batch.

PRESSURE RELEASE VALVE

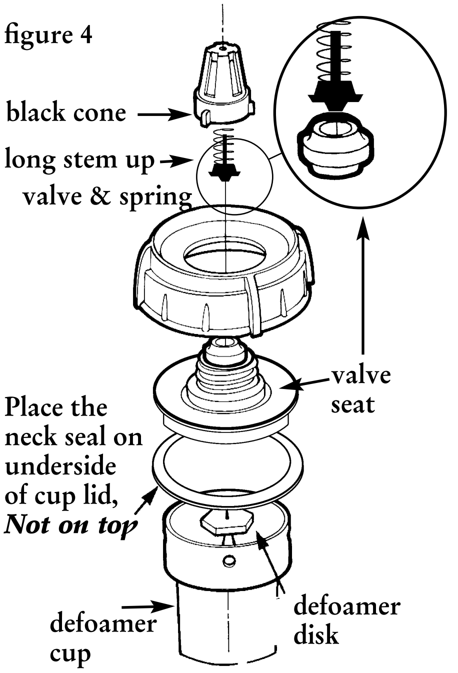
Assemble the pressure release valve as shown in figure 4. Make certain that the neck seal is placed on the bottom side of the cup lid. The pressure release valve regulates the release of CO_2 produced during fermentation. To maintain maximum natural carbonation, twist the black cone all the way down in a clockwise direction. The pressure release valve and spring must be disassembled prior to washing to assure clean sealing surfaces.

An important part of The Beer Machine pressure control system is the fermentation defoamer. This consists of a defoamer cup to trap excessive fermentation froth and a defoamer disk which protects the pressure valve from fermentation sediments. **Excessive frothing may be caused by very warm temperatures during fermentation.** See "FERMENTATION" page 3.

The defoamer disk is pressed onto the spike in the center of the defoamer cup. It should be replaced every time you start a new batch of beer. Defoamer Disks are available from your local retail merchant or The Beer Machine Co. customer service department.

The pressure release valve is a very important operating part. The sealing surfaces of the valve stem and the valve seat must be absolutely clean. **Overpressure, if not discharged, may damage or stretch clamps and/or rupture The Beer Machine**.

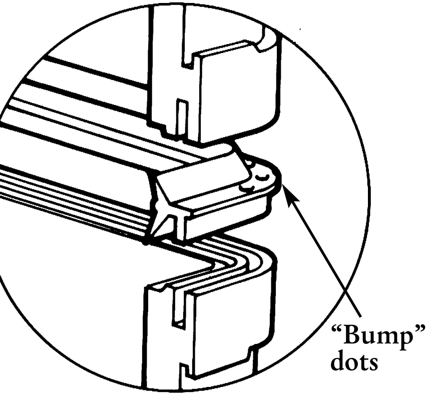
figure 4



MAIN SEAL

BEFORE BREWING – each batch, after washing and sanitizing your main seal, **heat treat** main seal **and** clamps using the following procedure:
Place seal **and** clamps in a flat pan (or sink) and submerge in **hot** tap water. (Be sure seal is not folded or twisted!) Let sit for fifteen minutes in the hot water, before draining and replacing with **cold** water. Allow to chill for fifteen minutes. This treatment will restore the main seal and clamps from a stretched condition to their original dimensions.

figure 5



INSTALL – main seal with corner "Bump" dots facing **up**. **First**

install the seal at all four corners, making sure any slack is even on all four sides. Press down firmly into the channel while sliding thumbs from corners to center, repeating for all four sides. Be sure you have a smooth even fit. **Do not** install a damaged main seal.

FINAL ASSEMBLY

Slowly lower the upper half of The Beer Machine in an even attitude so that all the edges of the top and bottom halves are aligned and meet at the side interlock tabs.

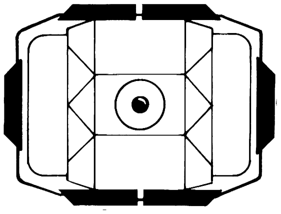
END CLAMPS

End clamps are beveled at both ends, see figure 1, item 3. Side clamps are beveled only on one end. Both are channeled to slide over rails sticking out from the upper and lower case halves of The Beer Machine over the main seal area. Carefully slide on one end clamp and then the other. Confirm that the two halves remain aligned at all corners and sides.

SIDE CLAMPS

The flat end of the clamp is positioned in the middle of The Beer Machine. Install one corner clamp and then the clamp on the diagonally opposite corner. Proceed in the same manner with the remaining two side clamps.

figure 6



PREPARE FOR BREWING STERILIZING & OPERATING PRESSURE TEST

Sterilizing:

Pour in approximately 3 litres or 3 quarts of cold water and add 1/4 cup of chlorine bleach to The Beer Machine (without defoamer disk).

Tighten down the top cap. Tilt The Beer Machine in all directions to swirl the solution around the inside of The Beer Machine. Open the spigot to sterilize float and tube. Remove cap and defoamer cup, place them in a very clean location. Pour out solution and rinse out with tap water.

Operating Pressure Test:

Fill The Beer Machine with fresh cold tap drinking water to fill line and tighten down the top cap. Wipe dry around where the spigot is attached as well as the main seal and clamps. Create a cup of fine soap suds by using one tablespoon of liquid dishwashing soap, and four tablespoons warm water. Stir to create fine bubbles. Apply solution to the following areas

1) where carbonation unit is attached to The Beer Machine.
2) around the top cap where it fastens to The Beer Machine, and
3) all around the top of the pressure release valve.

Pressurize The Beer Machine by introducing two or three small bursts of CO_2. Look for water leaks; if any appear, tighten that part more securely, if leakage continues it is likely due to incorrect installation of/or a missing, washer or seal; reassembly will be required.

Now test for "air" leaks. Add small bursts of CO_2 until soap bubbles pop around the pressure release valve, this indicates reaching normal full operating pressure. Observe for other small soap bubbles popping at this time over a one to two minute period. None should appear, other than a slow release at the pressure release valve. To complete test, pour out one or two cups of water from the spigot and observe valve closing, (by the absence of bubbles). When satisfied that The Beer Machine is operating correctly, empty contents and install a defoamer disk. Then proceed according to instructions for brewing.

Please note! If bubbles are indicating "air" leakage from any area other than the pressure relief valve, or if water leaks from the main seal or spigot, examine to determine cause. **Tightening a connection or re-seating an improperly installed main seal will correct the most common faults.**

If an air leak appears where the carbonation unit connects to The Beer Machine, you may tighten the unit by a quarter turn and it will operate as well in the horizontal position. If air leaks appear around the top cap, check to be certain the large flat white ring seal is properly installed underneath the defoamer cup lid, **not** on the top of the lid.

MAKING BEER

2.6 GAL. (28 servings of 12 fl. oz.)

You have sterilized and tested your Beer Machine. Now, here is all you need to do to make your naturally carbonated pure beer.

1. **WATER/BEER MIX**. Add room temperature water to The Beer Machine up to 1/3 of fill line. Open and pour your selected Beer Mix into The Beer Machine. Then, add more water up to the fill line (located on the side of the top case half, about 2 inches below the lid). Do not stir.
2. **YEAST**. Empty the contents of the 3 gm. Yeast packet into The Beer Machine. Do not stir. Check that the top cap which fits over the pressure release valve and defoamer cup has the neck seal in proper position as per figure 4. Secure the cap firmly to the top of The Beer Machine.
3. **FERMENTATION**.

(a) Wait and keep The Beer Machine at a constant room temperature until fermentation stops in 5 to 6 days. At a temperature of 68°F or 20°C, fermentation will begin within 12 to 24 hours. **The best results are often obtained with fermentation between 65°F and 72°F or 20°C and 23°C. CAUTION:** Overpressurization could result if obstruction of the pressure release valve occurs during a "hot fermentation". If room temperature exceeds 80°F the defoamer disk may not be able to fully protect the valve from sediments expelled by a "hot" or overactive fermentation. Maintain The Beer Machine at a steady room temperature during the fermentation period in order to avoid overactive conditions.

(b) Do not disturb The Beer Machine during the fermentation period. As a precaution, place The Beer Machine in a sink or tub for the first 5 to 6 days. Alternatively, locate a tray underneath The Beer Machine. Do not place directly over or near rugs or valuables which may be damaged by an overflow from the safety pressure release or an improperly installed seal. **During fermentation, do not store The Beer Machine at temperatures above 72°F or 23°C or in the sunlight**.

(c) After 5 or 6 days you may check to see if the fermentation has completed by pouring off a small sample and tasting it. If it tastes sweet, the fermentation has not yet completed and you should leave it at room temperature to ferment for a couple days longer. When you pour your sample it should come out with good pressure. If not, you may have a pressure leak and should pressure test your machine as described in the **"Operating Test"**. Natural carbonation is

Continued on back

produced during fermentation. It is important that all seals are properly located to ensure no pressure leaks occur during the fermentation period. Loose fitting caps or a loose carbonation unit may permit the natural CO_2 to escape during fermentation and result in low carbonation or “flat tasting” beer.

4. **CLARIFICATION**. When fermentation is complete after 5 or 6 days chill beer by placing The Beer Machine into the refrigerator. The cold temperature will clarify and condition your beer.
5. **SAMPLE** after tenth day. Add CO_2 from the carbonation unit as needed.

IMPORTANT

SAFETY AND CAUTION – Remember that The Beer Machine, while it is fermenting, is an operating pressure vessel. Although designed with the purpose of providing you enjoyment and safety, accidents are always possible. **Keep out of reach and away from small children or pets, especially during fermentation period when The Beer Machine is under fluctuating pressure**. Use caution to ensure the pressure release valve does not become contaminated with sediment from a very active fermentation or impeded by obstacles placed on top of it. Defoamer disks can help prevent sediments from reaching the pressure release valve during fermentation. It is recommended that during the first three to four days of fermentation The Beer Machine be placed out of contact from children or pets. Never pick up The Beer Machine by the spigot or carbonation unit while full or under pressure. Always carry by the base.

CLEANING – AFTER BREWING

To loosen cap and clamps when cleaning between brews, rinse under hot water. Then remove cap and fill the Beer Machine with hot water to loosen and soften sediments. **The carbonation unit should not be put into water.** Clean spigot thoroughly between brews. Open and close while flushing out with hot water and then a bleach flush. Inspect closely for any small particles. The spigot can be disassembled for more thorough cleaning by removing the handle-base. Simply turn the handle-base counter clockwise (it is threaded) and pull to remove. After cleaning, inspect white rubber valve and assemble the spigot turning the handle-base in a clockwise motion on to the spout. Completely disassemble all parts and wash with hot water. Store completely disassembled to prevent microorganisms from gathering in joints. **Do not use abrasives, solvents or a dishwasher**.

QUESTIONS?

1. Is chlorinated tap water okay? Yes, because it is bacteria free, unlike some well or spring water.

2. Can I bottle the beer? Yes. Transfer system available. Please call Customer Service for details.

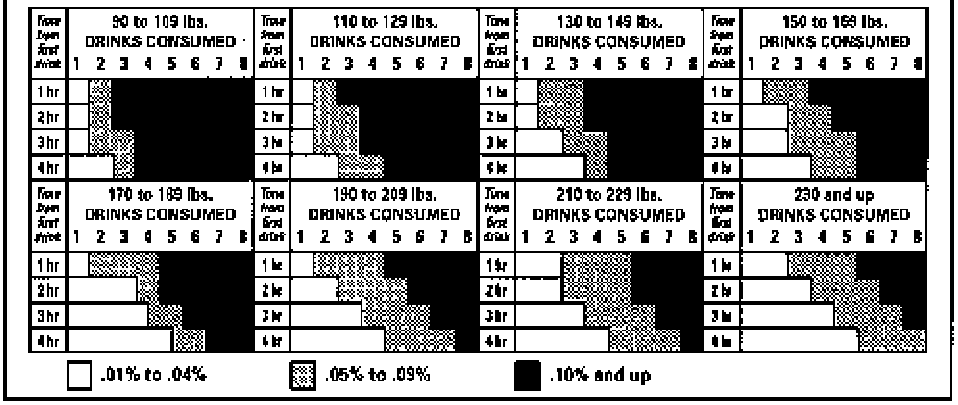
3. Can I use other Beer Mixes? Yes, if you adapt the recipe to the size (2.6 U.S. gallons/10 litres) of The Beer Machine.

4. How long will beer last in The Beer Machine? As long as you keep your Beer Machine in the refrigerator your beer will last at least 3 months.

SOCIAL RESPONSIBILITY

The alcohol content of beer ranges from about three percent to about eight percent by volume. Regardless of the specific alcohol content of beer, graphs such as the one included here consider 12 ounces of beer to be one drink. For some people, one beer, while not considered sufficient to cause legal impairment, is sufficient to cause irresponsible behaviour. For others, four beers might result in a blood alcohol level considered to be legally impaired, but might not cause that person to act in an irresponsible manner. Everyone should know and understand their legal limits, their tolerances and their obligations to society whenever they drink alcoholic beverages. Check the blood alcohol concentration guide to determine your personal limits. Be responsible about how you drink beer, who you offer it to, and how much you offer to others. **It's your social responsibility.** Please observe that pregnancy and alcohol do not mix.

Blood Alcohol Concentration Charts



CUSTOMER SERVICE LINE

If you have any questions or difficulty please call our customer service line by dialing 1-800-663-2739 or fax (604) 464-5672. Our customer service line is open from 8:30 AM to 5:00 PM Pacific Time. For updates and announcements concerning new beer mixes and features, please send in your warranty card.

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